

**Amendments to the Specification:**

**Please amend the paragraph on page 4, lines 2-21 as follows:**

Since the emitted electrons move only between the electron passage layer and the fluorescent layer, it is not necessary to take into account the straightness of the electrons, i.e., crosstalk, when the light-emitting device is in use. Accordingly, a voltage that is applied to achieve a desired current density is lower than required for an electron emitter, so that the light-emitting device has greatly reduced power consumption. Because the light-emitting device emits light by itself, it is not necessary to emit electrons into a vacuum space and apply the electrons to a corresponding fluorescent body. The light-emitting device can thus be used in an ambient atmosphere under ~~the~~-atmospheric pressure. As a consequence, the light-emitting device can emit light at a very low drive voltage under ~~the~~-atmospheric pressure. Inasmuch as the first and second electrodes, etc. can be formed on the electric field receiving member by thick-film printing, the light-emitting device according to the present invention is preferable also from the standpoints of durability and cost reduction.

**Please amend the paragraph bridging page 6, line 10-- page 7, line 4 as follows:**

Since the emitted electrons move only from the first electron passage layer to the second fluorescent layer, it is not necessary to take into account the straightness of the electrons, i.e., crosstalk, when the electron emitter is in use. Accordingly, a voltage that is applied to achieve a desired current density is lower than required for an electron emitter, so that the light-emitting device has greatly reduced power consumption. Because the light-emitting device emits light by itself, it is not necessary to emit electrons into a vacuum space and apply the electrons to a corresponding fluorescent body. The light-emitting device can thus be used in an ambient atmosphere under ~~the~~-atmospheric pressure. As a consequence, the light-emitting device can emit light at a very low drive voltage under ~~the~~-atmospheric

pressure. Furthermore, since the emission of electrons is controlled by the third and fourth electrodes, desired light emission characteristics can easily be obtained. Inasmuch as the first and second electrodes, etc. can be formed on the electric field receiving member by thick-film printing, the light-emitting device according to the present invention is preferable also from the standpoints of durability and cost reduction.

**Please amend the paragraph bridging page 8, line 23--page 9, line 17 as follows:**

A field emission display according to ~~he~~the present invention comprises a two-dimensional array of light-emitting devices, each of the light-emitting devices comprising:

- an electric field receiving member made of a dielectric material;
- a first electrode disposed on one surface of the electric field receiving member;
- a second electrode disposed on the one surface of the electric field receiving member, the second electrode and the first electrode jointly defining a slit;
- an electron passage layer disposed on the first electrode, the second electrode, and the slit, the electron passage layer being resistant to a predetermined voltage when the predetermined voltage is applied thereto, the electron passage layer being made of a material having such characteristics as to pass electrons therethrough;
- a fluorescent layer disposed on the electron passage layer; and
- a transparent electrode disposed on the fluorescent layer or a third electrode disposed at a predetermined spaced interval from the fluorescent layer.

**Please amend the paragraph bridging page 9, line 18--page 10, line 3 as follows:**

According to the present invention, since the light-emitting devices emit light by themselves when the FED displays information, the FED is not required to have fluorescent bodies, and as a result, it is not necessary to take into account the pitch of fluorescent bodies and to provide a grid. As a consequence, the FED according to the

present invention is preferable from the standpoints of higher definition, increased resolution, smaller size, and cost reduction. Furthermore, since the light-emitting devices can be used under the-atmospheric pressure, the FED is not required to have a vacuum space therein, a feature which is very advantageous for making the FED low in profile.

**Please amend the paragraph on page 11, lines 11-27 as follows:**

According to the present invention, since the light-emitting devices emit light by themselves when the FED displays information, the FED is not required to have fluorescent bodies, and as a result, it is not necessary to take into account the pitch of fluorescent bodies and to provide a grid. As a consequence, the FED according to the present invention is preferable from the standpoints of higher definition, increased resolution, smaller size, and cost reduction. Furthermore, since the light-emitting devices can be used under the-atmospheric pressure, the FED is not required to have a vacuum space therein, a feature which is very advantageous for making the FED low in profile. Because the emission of electrons is controlled by the third and fourth electrodes in the individual light-emitting devices, desired light emission characteristics are easily obtained, allowing the FED to display information further well.

**Please amend the paragraph on page 12, lines 4-6 as follows:**

~~Said~~ The electric field receiving member may be of a ~~pizeoelectric~~ piezoelectric material, an anti-ferroelectric material, or an electrostrictive material.

**Please amend the paragraph bridging page 15, line 19--page 16, line 5 as follows:**

The ceramics that the substrate  $[[4]]_2$  may be made of includes stabilized zirconium oxide, aluminum oxide, magnesium oxide, titanium oxide, spinel, mullite, aluminum nitride, silicon nitride, glass, and mixtures thereof. Of these materials,

aluminum oxide and stabilized zirconium oxide are preferable from the standpoint of strength and rigidity. In particular, stabilized zirconium oxide is preferable as the mechanical strength is high, the tenacity is high, and its chemical reaction with the drive electrode 4 and the common electrode 5 is relatively low. Stabilized zirconium oxide includes stabilized zirconium oxide and partially stabilized zirconium oxide. Since stabilized zirconium oxide has a crystalline structure such as a cubic system, no phase transition occurs therein.

**Please amend the paragraph bridging page 19, line 10--page 20, line 13 as follows:**

The electrically conductive coating layer 6 serves to further lower the voltage applied to the light-emitting device 1, and comprises a layer of carbon having a thickness of 3  $\mu\text{m}$ , for example. However, the electrically conductive coating layer 6 may be made of an electric conductor that is resistant to a high-temperature oxidizing atmosphere, e.g., a pure metal, an alloy, a mixture of insulating ceramics and a pure metal, a mixture of insulating ceramics and an alloy, or the like. Preferably, the electrically conductive coating layer 6 should be made of a precious metal having a high melting point such as platinum, palladium, rhodium, molybdenum, or the like, a material whose main component comprises an alloy of silver and palladium, an alloy of silver and platinum, an alloy of platinum and palladium, or the like, or a cermet of platinum and a ceramics material. More preferably, the electrically conductive coating layer 6 should be made of a material whose main component comprises platinum or a platinum-based alloy. The electrically conductive coating layer 6 may also be made of a graphite material such as thin-film diamond, diamond-like carbon, or carbon nanotube, for example. The ceramics material to be added to the electrically conductive coating layer material should preferably be of a proportion ranging from 5 to 30 volume %. The electrically conductive coating layer 6 should preferably have a resistance ranging from several kilohms to 100 kilohms. The electrically conductive

coating layer 6 is formed of evaporated carbon (a specific example is an evaporated layer of "CARBON 5PC" manufactured by Sanyu Kogyo Co.), filled carbon (a specific example is a filled layer of "FW200" manufactured by Degussa Co.), printed carbon, or the like.

**Please amend the paragraph bridging page 20, line 14--page 21, line 3 as follows:**

The electron passage layer 7 is made of a material which is resistant to a predetermined voltage (which may be several hundreds volts or lower if the fluorescent layer 8 is of a low-voltage type, and several kV or higher if the fluorescent layer 8 is of a high-voltage type) when the voltage is applied to the electron passage layer 7, and which has such characteristics as to pass electrons therethrough. The material may have a dielectric constant lower than dielectric materials, and may specifically be amorphous SiO<sub>x</sub>, porous polysilicon, alumina, or the like. The electron passage layer 7 may also be in the form of an insulating layer on a porous material, a layer of carbon having a diamond structure whose resistance can be adjusted by the ~~introducing~~introduction of an impurity thereinto, a layer of carbon having a graphite structure, and a high-resistance layer such as of diamond-like carbon, carbon nanotube, or the like.

**Please amend the paragraph on page 21, lines 8-17 as follows:**

Operation of the light-emitting device according to the present embodiment will be described below. When a pulsed voltage is applied to the drive electrode 4, an electric field is concentrated in the vicinity of the slit, producing a field emission phenomenon. The emitted electrons are applied to the fluorescent layer 8 through the electrically conductive coating layer 6 and the electron passage layer 7 ~~to the fluorescent layer 8~~ when a bias voltage is applied to the transparent electrode 9. The fluorescent layer 8 is excited to emit light through the transparent electrode 9 as indicated by the arrows.

**Please amend the paragraph on page 25, lines 9-23 as follows:**

FIG. 9A is a vertical longitudinal sectional view of a light-emitting device according to a seventh embodiment of the present invention, and FIG. 9B is a cross-sectional view taken along line IXB - IXB of FIG. 9A. A light-emitting device 81 according to the present embodiment has a collector electrode 12 disposed at a predetermined spaced interval from the fluorescent layer 8, instead of the transparent electrode 9 in the first embodiment shown in FIG. 1, and a bias voltage + Vb is applied to the collector electrode 12. Electrons that are emitted when a pulsed voltage is applied to the drive electrode 4 are applied to the fluorescent layer 8 through the electron passage layer 7 ~~to the fluorescent layer 8~~ when a bias voltage + Vb is applied to the collector electrode 12. The fluorescent layer 8 is excited to emit light as indicated by the arrows.

**Please amend the paragraph on page 26, lines 12-26 as follows:**

FIG. 11A is a vertical longitudinal sectional view of a light-emitting device according to a ninth embodiment of the present invention, and FIG. 11B is a cross-sectional view taken along line XIB - XIB of FIG. 11A. A light-emitting device ~~81~~101 according to the present embodiment has a collector electrode 13 disposed at a predetermined spaced interval from the fluorescent layer 8, instead of the transparent electrode 9 in the eighth embodiment shown in FIGS. 10 and 10B, and a bias voltage + Vb is applied to the collector electrode ~~12~~13. Electrons that are emitted when a pulsed voltage is applied to the drive electrode 4 are applied through the electron passage layer 7 to the fluorescent layer 8 when a bias voltage + Vb is applied to the collector electrode 13. The fluorescent layer 8 is excited to emit light as indicated by the arrows.